STATIONARY ENGINEERING

A student who has completed the Job Corps Stationary Engineering program is equipped with the skills to contribute to the workplace as a valued employee from day one. Competence in academic and vocational skills is required for graduation. In addition, Job Corps students learn employability and technological skills. To complete his or her Stationary Engineering training, a student must master skills in these categories:

SAFETY

Identify potentially hazardous conditions with tools, equipment, chemicals, work and building areas; demonstrate appropriate safety precautions to select and use safety equipment/gear when working on tasks; follow specified safety procedures for selecting, setting up and using ladders, scaffolding, etc.; follow specified procedures for safe handling/storage of hazardous chemicals, compounds, combustible/flammable materials; read, interpret and follow manufacturers' label instructions and service manuals.

HAND AND POWER TOOLS

Identify and describe function of tools; demonstrate safe use of tools; perform care and maintenance of tools.

ELECTRICITY

Demonstrate basic knowledge of electricity; locate shut-offs for electrical devices; identify types and sizes of electrical wire; identify potential electrical hazards; identify and safely use electrical testing equipment; troubleshoot, repair and replace electrical components.

PLUMBING

Identify various plumbing materials and demonstrate their application; locate shut-off for plumbing fixtures and lines; identify and trace distribution lines in a facility; perform cutting, threading, soldering and brazing on pipes and lines; perform repair or replacement of basic plumbing components.

FIRE SUPPRESSION SYSTEMS/BUILDING SAFETY

Maintain smoke detectors, emergency lighting systems and emergency exits; identify and service various classes of fire extinguishers; identify, service and maintain sprinkler systems; perform testing procedures on automated fire control systems.

AIR CONDITIONING AND REFRIGERATION

Demonstrate basic knowledge of refrigeration; check, clean and replace air filters; select, adjust settings on basic wall thermostat; identify and replace basic wall thermostats; summarize, winterize cooling units by cleaning, lubricating system; identify and describe operation of refrigeration components; perform basic troubleshooting techniques.

BOILERS

Identify various types and functions of boilers and their components; demonstrate safe boiler room service procedures; identify sequence of various boiler operations; perform basic boiler water treatment testing.

PUMPS

Identify types and functions of pumps; perform testing procedures on pumps; remove, repair or install various pumps.

INSTRUMENTS AND CONTROLS

Identify electronic, pneumatic and hydraulic instruments and controls along with their functions; perform instrument readings and correct records data; perform maintenance and testing of instruments and controls.

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INDOOR AIR QUALITY (IAQ)

Identify IAQ problems oneself and with equipment; perform IAQ preventive maintenance; demonstrate proper techniques to safely handle and store chemicals used for IAQ.

REFRIGERANT HANDLING

Demonstrate knowledge of regulations and perform safe handling and storage of refrigerants; perform proper recovery, reclaiming and recycling procedures of refrigerant.

BLUEPRINTS/SCHEMATICS

Read and identify correct information on blueprints and schematics.

PREVENTIVE MAINTENANCE

Identify and demonstrate preventive maintenance program requirements; perform scheduled preventive maintenance procedures; perform recordkeeping of preventive maintenance performed and maintain schedule of routine preventive maintenance.